

**AMENDMENTS TO THE CLAIMS**

Claim 1. (currently amended) A system monitoring system comprising:

external monitoring means for monitoring the state of a controller within an apparatus to be monitored, the state being obtained when a control program stored in storage means in the apparatus controls, via an internal bus of the apparatus, said controller to operate; ~~and~~

bus-access detection means for detecting, in real time, based on internal bus information, each match of an address set with an address line on said internal bus by said controller; said bus-access detection means being external to said controller and internal to said apparatus;

execution address detection means for detecting execution address information of said external monitoring means in real time based on said internal bus information, said execution address detection means being external to said controller and internal to said apparatus;

wherein information on each match and the execution address information ~~are is~~ output to said external monitoring means in real time; and

a display for displaying said information on each match and said execution address information on said internal bus by said controller; wherein said display numerically displays data on said internal bus when latching the data.

Claims 2-5. (canceled)

Claim 6. (currently amended) A system monitoring method for monitoring, by external monitoring means, the state of a controller within an apparatus to be monitored, the state being obtained when a control program stored in storage means in the apparatus controls, via an internal bus of the apparatus, said controller to operate, said system monitoring method comprising the steps of:

using bus-access detection means to detect, in real time, based on internal bus information, each match of an address set with an address line on said internal bus by said monitoring means; said bus-access detection means being external to said controller and internal to said apparatus; ~~and~~

using execution address detection means to detect, in real time, based on said internal bus information, execution address information of said external monitoring means; said execution address detection means being external to said controller and internal to said apparatus;

outputting information on each match and the execution address information to said external monitoring means in real time; and

displaying on a display said information on each match and said execution address information by said monitoring means, and numerically displaying data on said internal bus when latching the data.

Claims 7-10. (canceled)

Claim 11. (new) The system monitoring system according to Claim 1, wherein said display sets a hold time selected from predetermined values for displaying

said information on each match and said execution address information.

Claim 12. (new) The system monitoring system according to Claim 1, wherein said bus-access detection means generates a hit signal based on a comparison of said internal bus information with access points having predetermined values; and if said internal bus information matches plural access points said hit signal is generated for said access point having a lower predetermined value; and

wherein said execution address detection means generates said hit signal based on a comparison of said internal bus information with real-time events having predetermined values; if said internal bus information matches plural real-time events, said hit signal is generated for said real-time event having a lower predetermined value.

Claim 13. (new) The system monitoring method according to Claim 6, wherein said displaying step sets a hold time selected from predetermined values for displaying said information on each match or said execution address information.

Claim 14. (new) The system monitoring method according to Claim 6, wherein said bus-access detection step generates a hit signal based on a comparison of said internal bus information with access points having predetermined values; and if said internal bus information matches plural access points said hit signal is generated for said access point having a lower predetermined value; and

wherein said execution address detection step generates said hit signal based on a comparison of said internal bus information with real-time events having predetermined

values; if said internal bus information matches plural real-time events, said hit signal is generated for said real-time event having a lower predetermined value.